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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,758	02/28/2002	Dan Eldon Hendriksen	96B026/6	1202

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EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT PAPER NUMBER

1725

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,758

Applicant(s)

HENDRIKSEN ET AL.

Examiner

Christina Ildebrando

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 3 recites the limitation "wherein said first crystals of said first zeolite have an average particle size greater than about 0.1 micron." This limitation renders the claim indefinite because the particle size range is broader than the range recited in the independent claim, which is improper.
4. Claim 8 recites the limitation "wherein the average particle size of the crystals of said first zeolite is from about 1 to about 6 microns." This limitation renders the claim indefinite because the limitation "about" renders the particle size range broader than the range recited in the independent claim, which is improper.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-10 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Mohr et al.

Mohr et al. (US 5,993,642) discloses a hydrocarbon conversion process using a zeolite bound zeolite catalyst. The zeolite bound zeolite catalyst comprises first zeolite particles which have an average particle size greater than 0.1 micron and a binder comprising second zeolite particles having an average particle size less than the first particles (column 2, lines 50-57). The average particle size of the first zeolite is preferably from 0.1-15 microns, more preferably from 2-6 microns and the average particle size of the second zeolite is preferably from 0.1-0.5 micron (column 4, lines 20-25). The reference teaches that the second zeolite particles bind the first zeolite particles by intergrowing so as to form a coating or a partial coating on the larger first zeolite crystals (column 3, lines 1-5).

Suitable zeolites include large pore zeolites such as MAZ, MEI, EMT, and MOR (column 3, lines 50-60). The reference specifically claims that the first and second zeolite particles include zeolites of type MAZ, MEI, EMT, and mordenite (column 23, lines 5-12 and 30-35). The first and second zeolite particles may be the same structure type (column 23, lines 15-18).

The zeolite bound zeolite catalyst composition is prepared from a silica bound extrudate of the first zeolite crystals by converting the silica present in the extrudate

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which serves to bind the zeolite particles together (column 7, lines 15-20). In this way, the catalyst composition does not contain significant portions of non-zeolitic binder, i.e. preferably less than 5% by weight of non-zeolite binder (column 7, lines 25-30).

Regarding the limitation "the external surface acidity of said first crystals of said first zeolite is less than the acidity within the channels of said first zeolite," recited in claim 1, and the limitation "the external surface acidity of said first crystals of said first zeolite is at least 50% less than the acidity within the channels of said first zeolite," recited in claim 62, it is the position of the examiner that because the reference teaches the use of the same zeolites having the same crystal size as suitable for the first zeolite, the required relationship between the surface acidity and the intra-crystalline acidity would necessarily be met by the reference. Refer also to the discussion in the instant specification at page 10, lines 10-16. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

Regarding claim 10, the reference does not specifically teach that the second crystals are resistant to attrition. However, it is the position of the examiner that because the reference teaches the use of the same zeolite composition, from the same materials, and produced by the same process, the second crystals would inherently be resistant to attrition. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in

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fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Mohr et al.

Terminal Disclaimer

7. The terminal disclaimer filed on October 21, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,040,259 and US Application 10/127,805 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

8. Applicant's arguments filed October 21, 2003 have been fully considered but they are not persuasive.

With respect to the 102(e) rejection over the Mohr et al. reference, applicant argues that the reference fails to teach (1) the claimed particle size and (2) the relationship between the surface and intracrystalline acidity. However, with respect to (1), the reference teaches the claimed particle size. Refer to column 4, lines 10-20 of '642. With respect to (2), it is the position of the examiner that the claimed relationship would be inherently present in the composition taught by Mohr et al. in light of the fact that the reference teaches the use of the same zeolites having the same crystal size.

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9. The rejection under 35 USC 102(b) over WO 92/12928 and the obviousness double patenting rejection over US Patent No. 5,665,325 have been withdrawn in light of the amendment to claim 1.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAI
February 10, 2004

Kiley Stoner AU 1725
Kiley Stoner 2/10/04